

Attachment 3


Engineering Activities Review/Update

26th Meeting of the NECC
July 20,1999

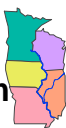
Presented by

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Upper Mississippi River Illinois Waterway System Feasibility Study




Briefing of Engineering Activities Small Scale and Large Measures


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History of Small Scale Measures



1991 Reconnaissance Report


- Minimal Small Scale Measures Identified

1995 General Assessment of Small Scale Measures


- 92 Measures Identified and Evaluated
- 16 Recommended for further Study

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History of Small Scale Measures



1998 Detailed Assessment of Small Scale Measures


- 16 Measures Fully Evaluated for Cost and Performance

1999 Summary of Small-Scale Measures Screening


- 5 Measures Carried Forward to Economic Analysis Include:
 - Congestion Tolls
 - Guidewall Extensions w/switchboats
 - Approach Improvements
 - Mooring Facilities
 - Guidewall Extensions w/Powered Traveling Keels

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History of Small Scale Measures

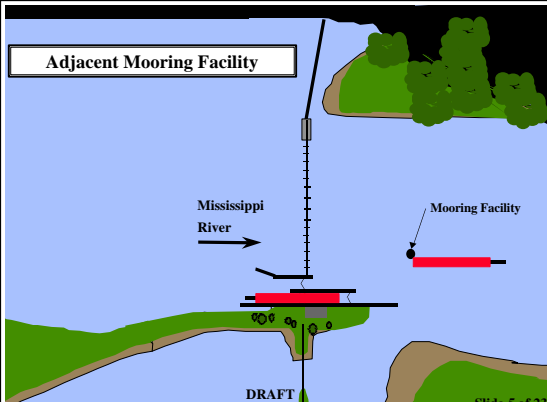


1999 Systems Economic Analysis

- 3 Measures Eliminated by Systems Analysis
 - Congestion Tolls
 - Guidewall Extensions w/switchboats
 - Approach Improvements
- 2 Measures Carried Forward
 - Mooring Facilities
 - Guidewall Extensions w/Powered Traveling Keels


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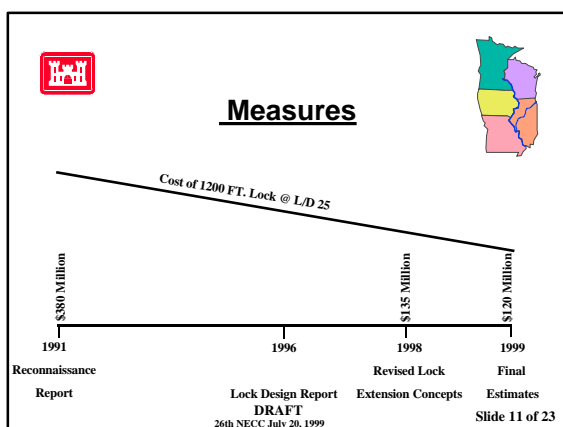
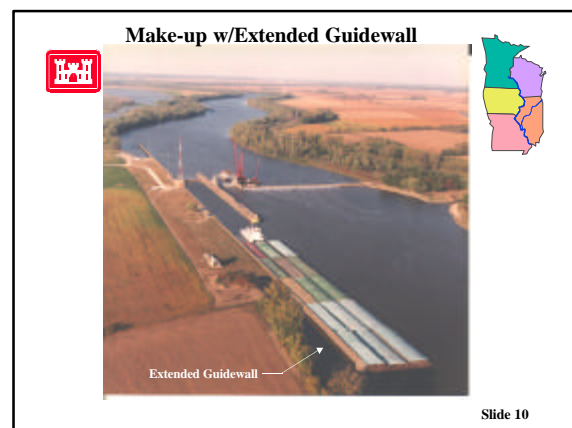
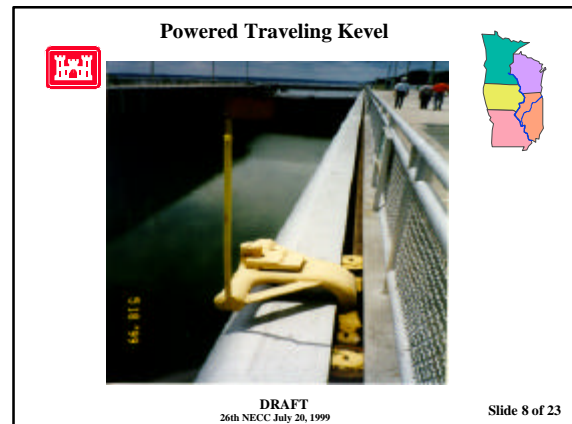
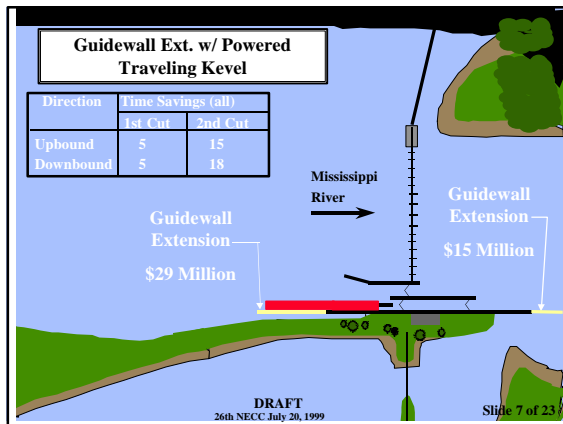
Mooring Facilities



Lock	Dir	Miles Closer	Time Savings	Cost
12	UB	1.0	13 min	\$50K
18	UB	0.7	9 min	\$50K
20	UB	0.8	11 min	\$50K
22	UB	0.5	7 min	\$50K
24	DB	0.5	7 min	\$500K

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History of Large Scale Measures(L/D 25)

1991 Reconnaissance Report \$380 Million

- Minimum E & D Completed
- Innovative Lock Design and Construction
- Initial Contingencies 25%(20% Standard for Feasibility Study)
- Lock Extension Least First Cost

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History of Large Scale Measures(L/D 25)




1998 Revised Lock Extension Report \$135 Million

- Specifically designed to reduce delays to navigation during construction
- Reuse more of the existing structure
 - No changes to upstream guidewall
 - Fill lock with existing filling system
 - Empty lock with modified existing system and supplement as required
 - Existing Lower guidewall is reused as a lockwall
 - New gate sill elevation and lock floor matches existing elevations
- 600 ft long downstream guidewall to reduce construction time and cost
- Float-in lower gate monolith to reduce on-site work
- Most construction during three 90-day wintertime closures
- 35% Contingencies

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History of Large Scale Measures(L/D 25)

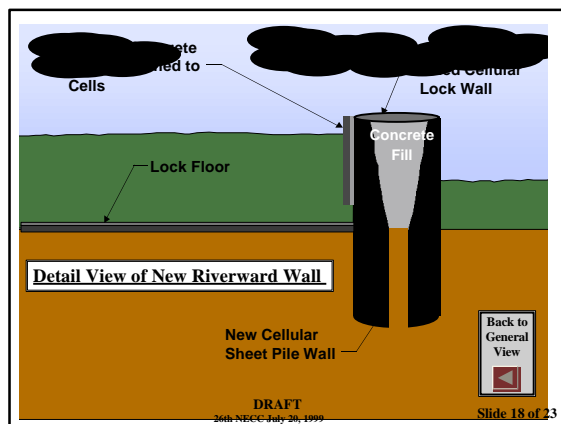
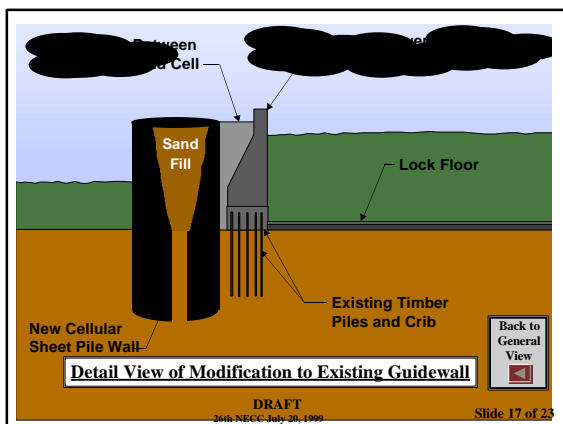
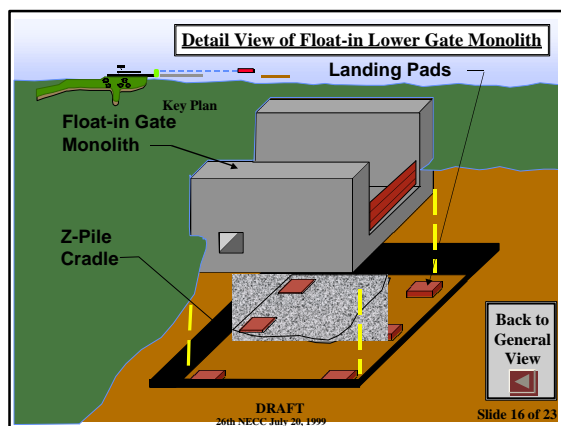
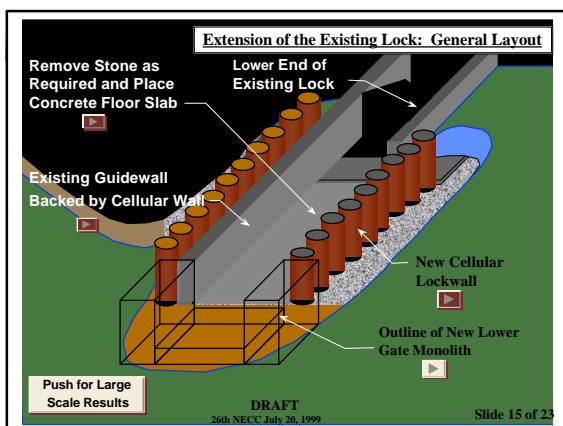


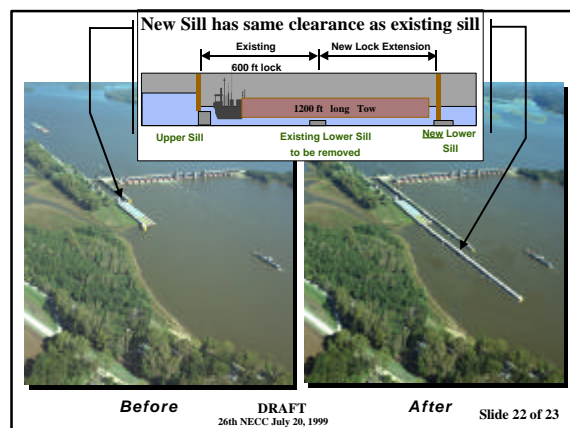
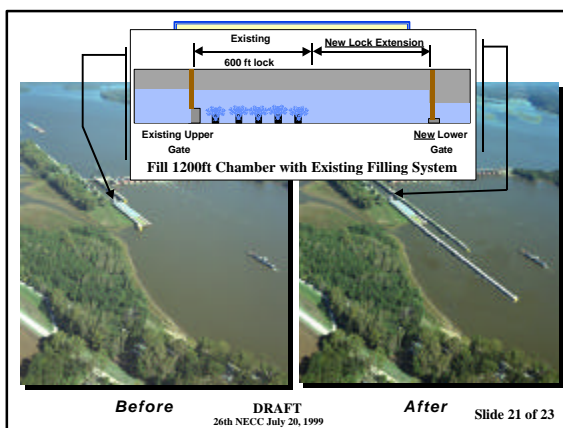
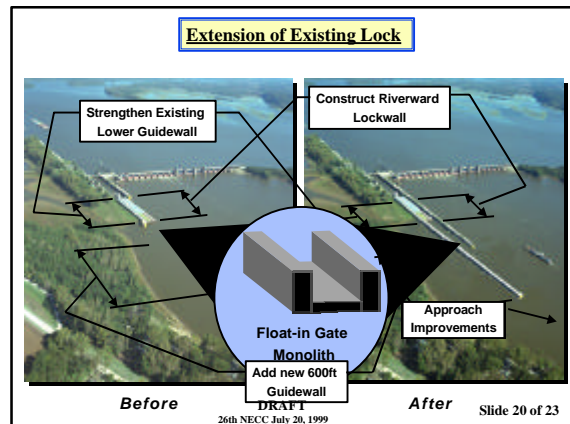
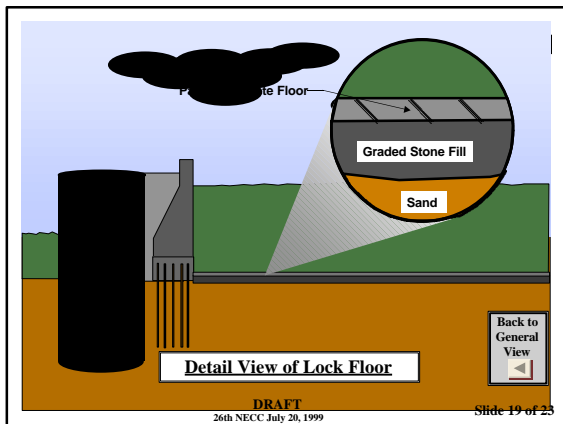
1999 Final Estimates \$120 million


- Contingencies Reduced to 25 % Based on Additional Corps Experience Base
- Upper Approach Improvements Eliminated
 - Not Incremental Justified
- Without Project Condition Included 2 cycles of Rehab in Next 50 Years
 - If Lock Extension Built Before 2013, 1 Cycle of Rehab can be Avoided

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Briefing of Engineering Activities

Questions?

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